

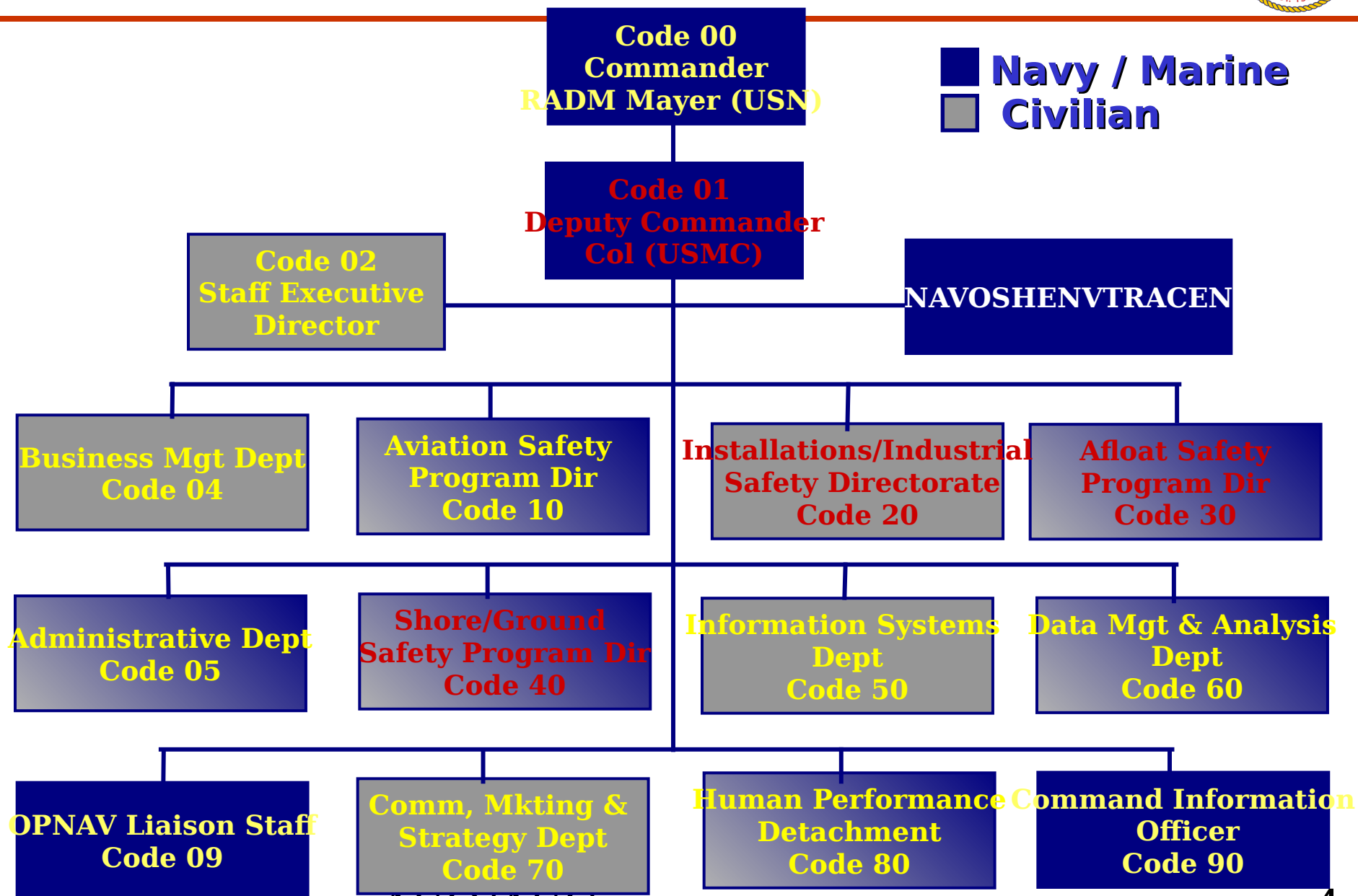


CDR ED "CLYDE" LANGFORD
Director Aviation Safety
Naval Safety Center

Cultural Mindsets



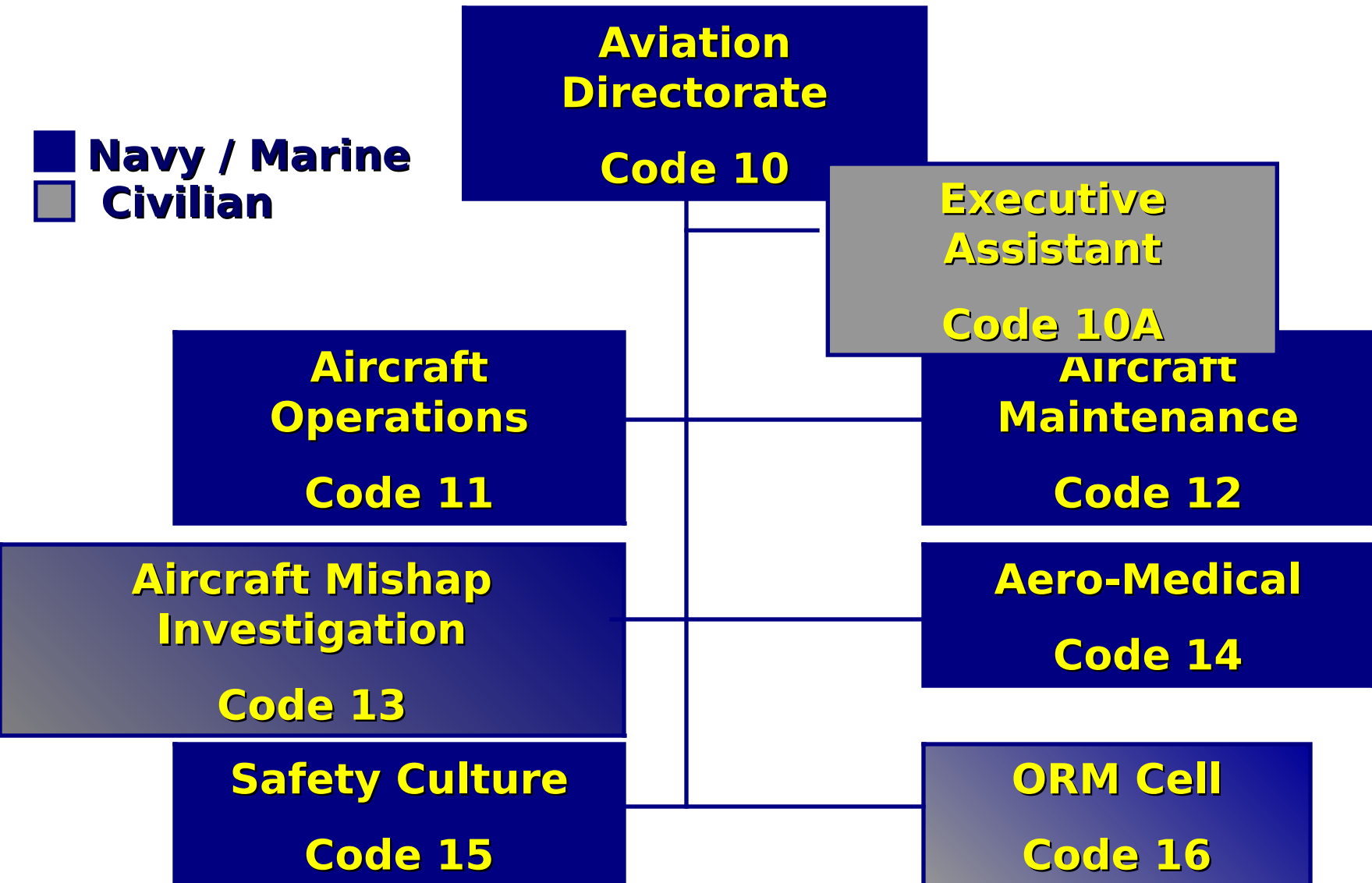
Commander, Naval Safety Center





Aviation Directorate Organization

■ Navy / Marine
■ Civilian



ASO/ASC

Naval Safety Center

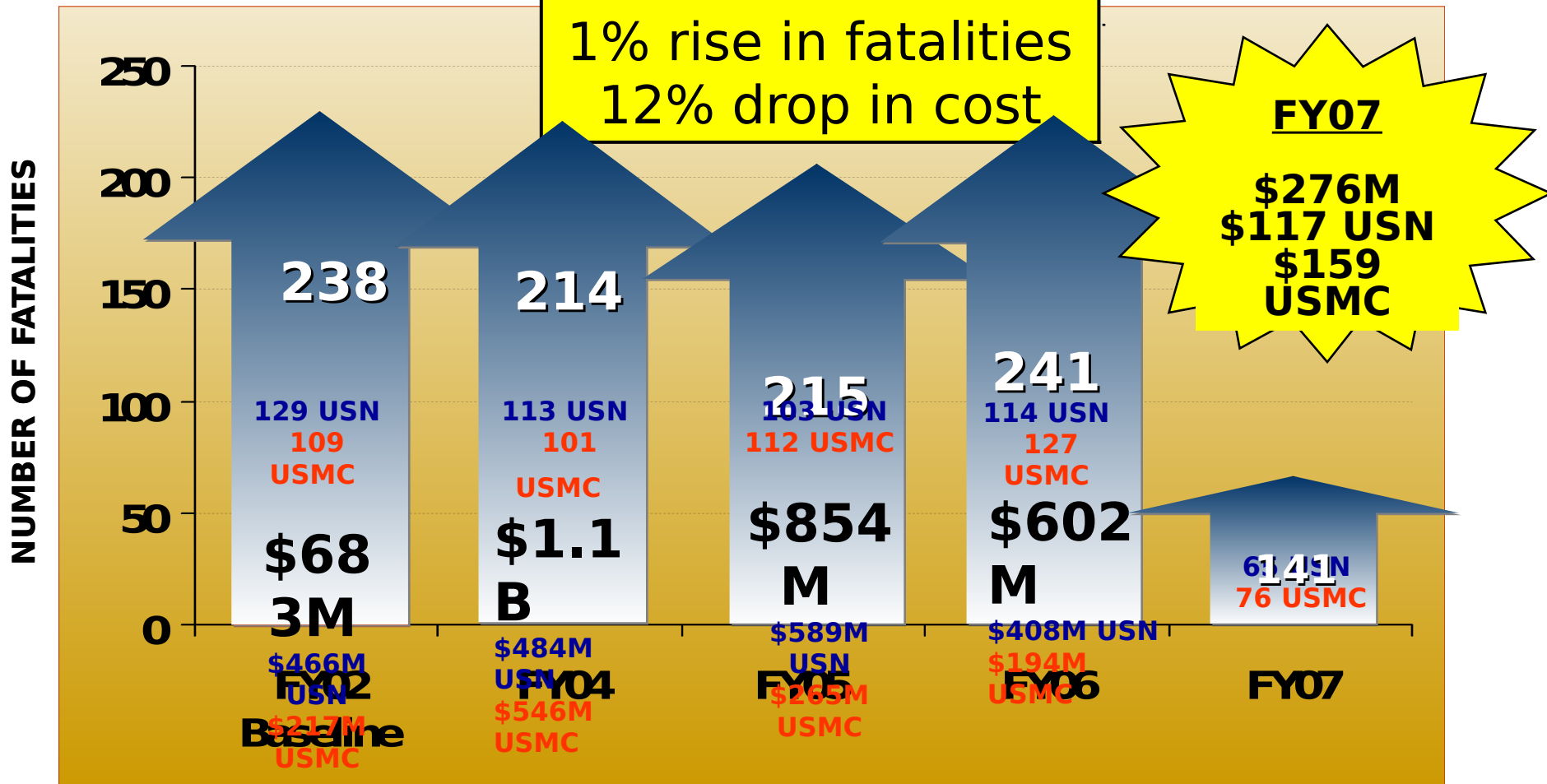
**provides safety assistance
and advice to the CNO,
CMC, and the Deputy
Assistant SECNAV for Safety
in order to enhance the
warfighting capability of the
Navy and Marine Corps,
preserve resources and
improve combat readiness**

USN/USMC Fatalities & Resources Lost



During Action

From FY02 to FY06:
1% rise in fatalities
12% drop in cost



ENDSTATE GOAL IS ZERO

NSC Data: 22 Jul 07

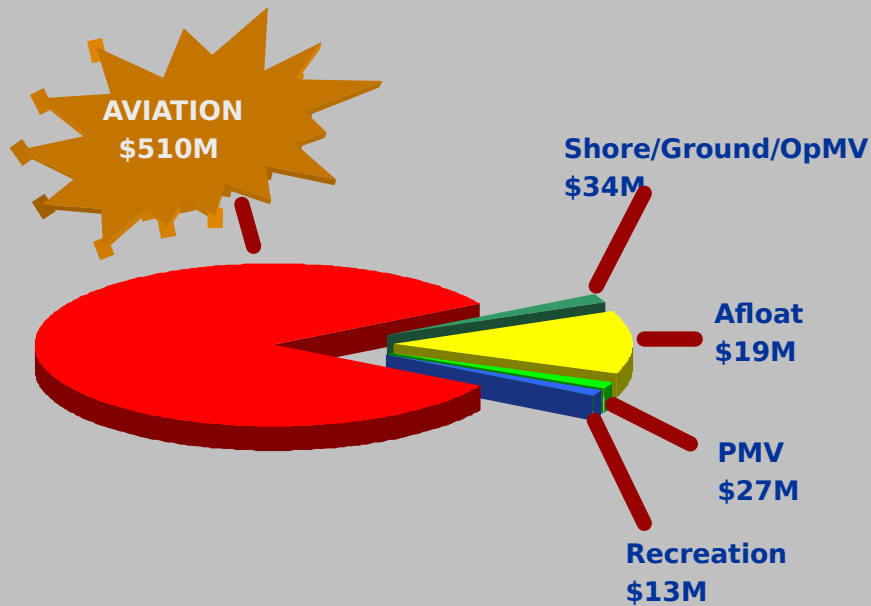
ASO/ASC

FY06 Total Cost and Deaths

Navy and Marine Corps

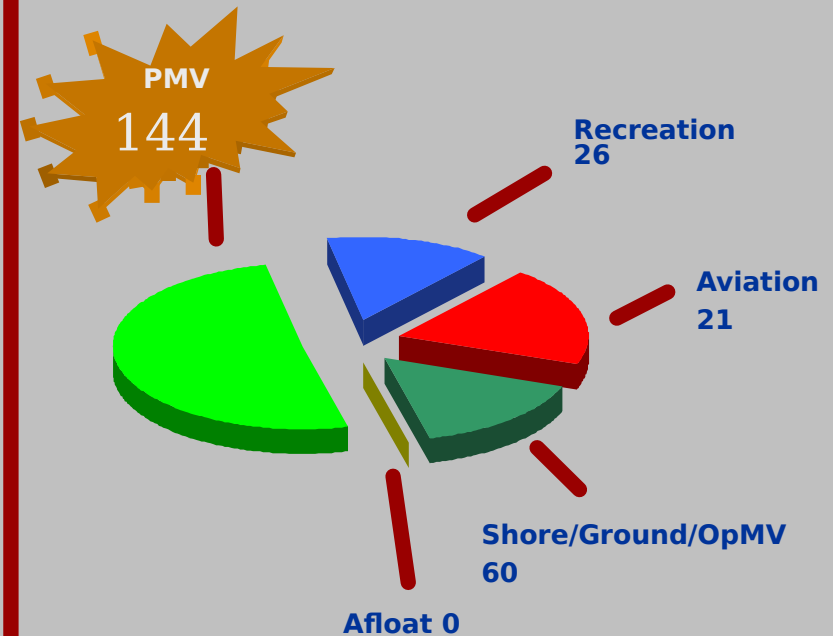


Cost



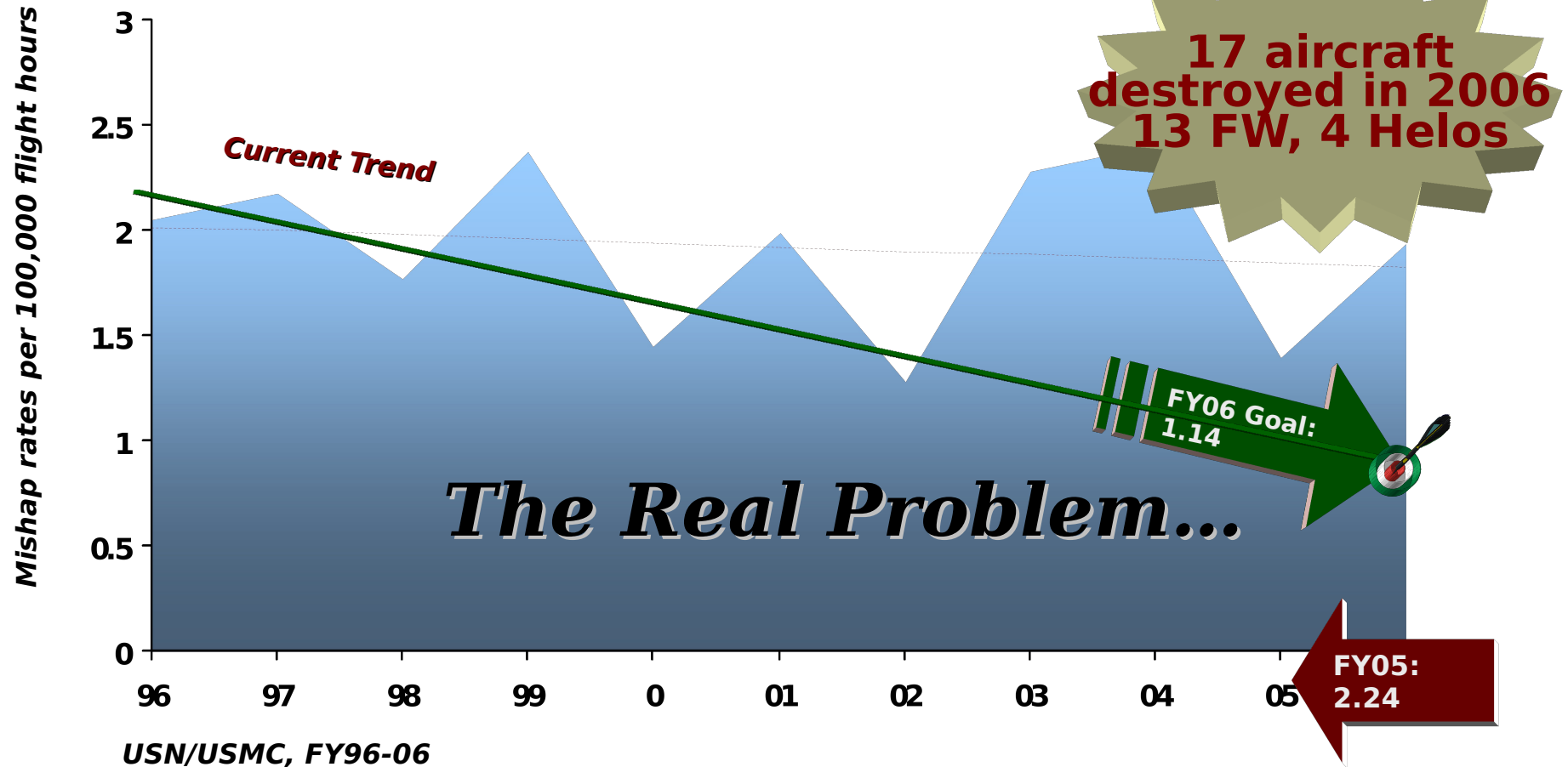
Total Cost: \$602M

Fatalities



Total Fatalities: 241

Naval Aviation Mishap Trend



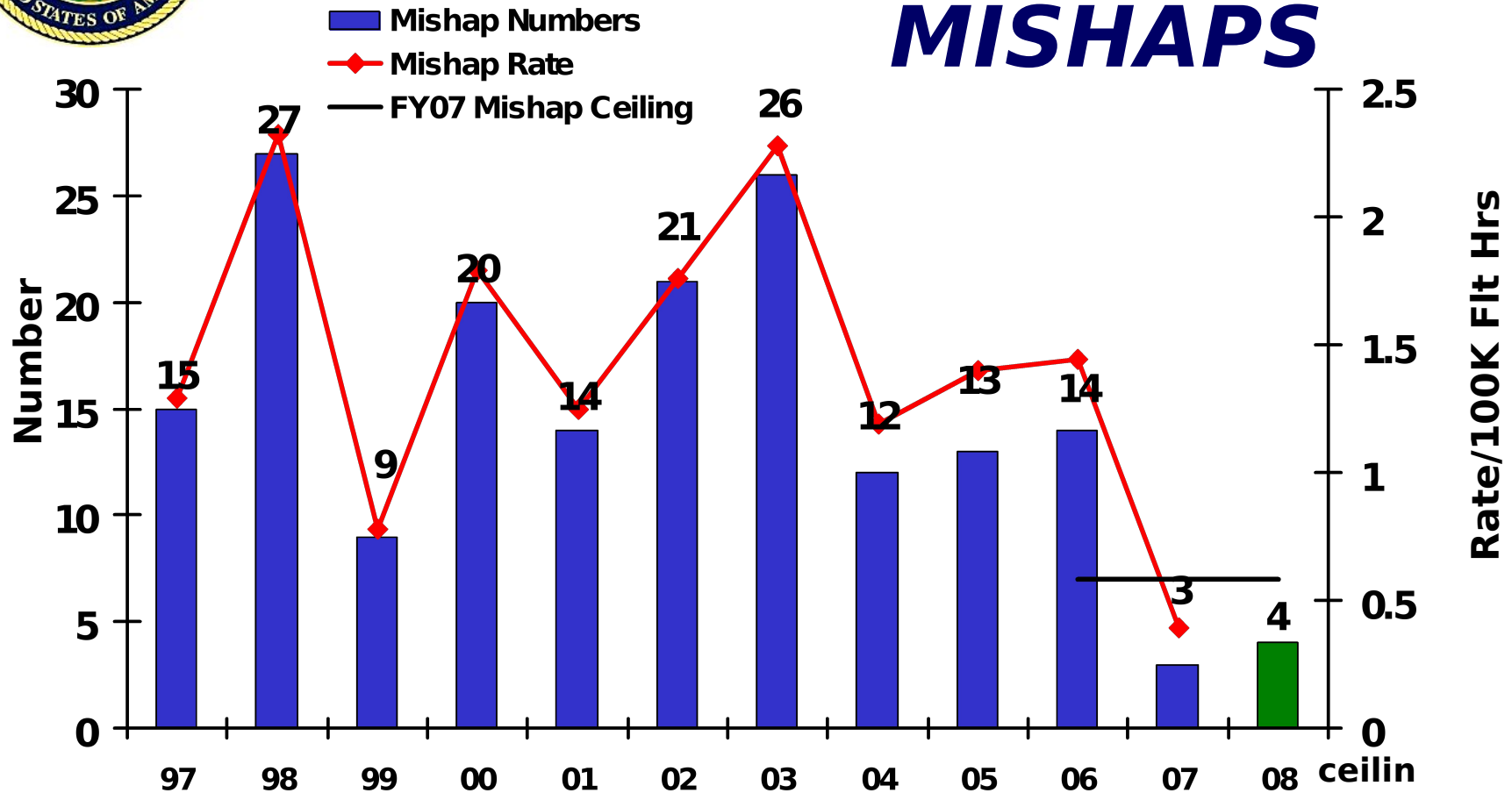


11-08-98 C 65
19:18:58 28

132 15888 89



CLASS A FLIGHT MISHAPS



0 Class A Flight Mishaps during this reporting period 21 July
 - 27 July

July 06

CLASS A MISHAPS/MISHAP RATE FY COMPARISON: 3 / 0.39 14/
 1.74

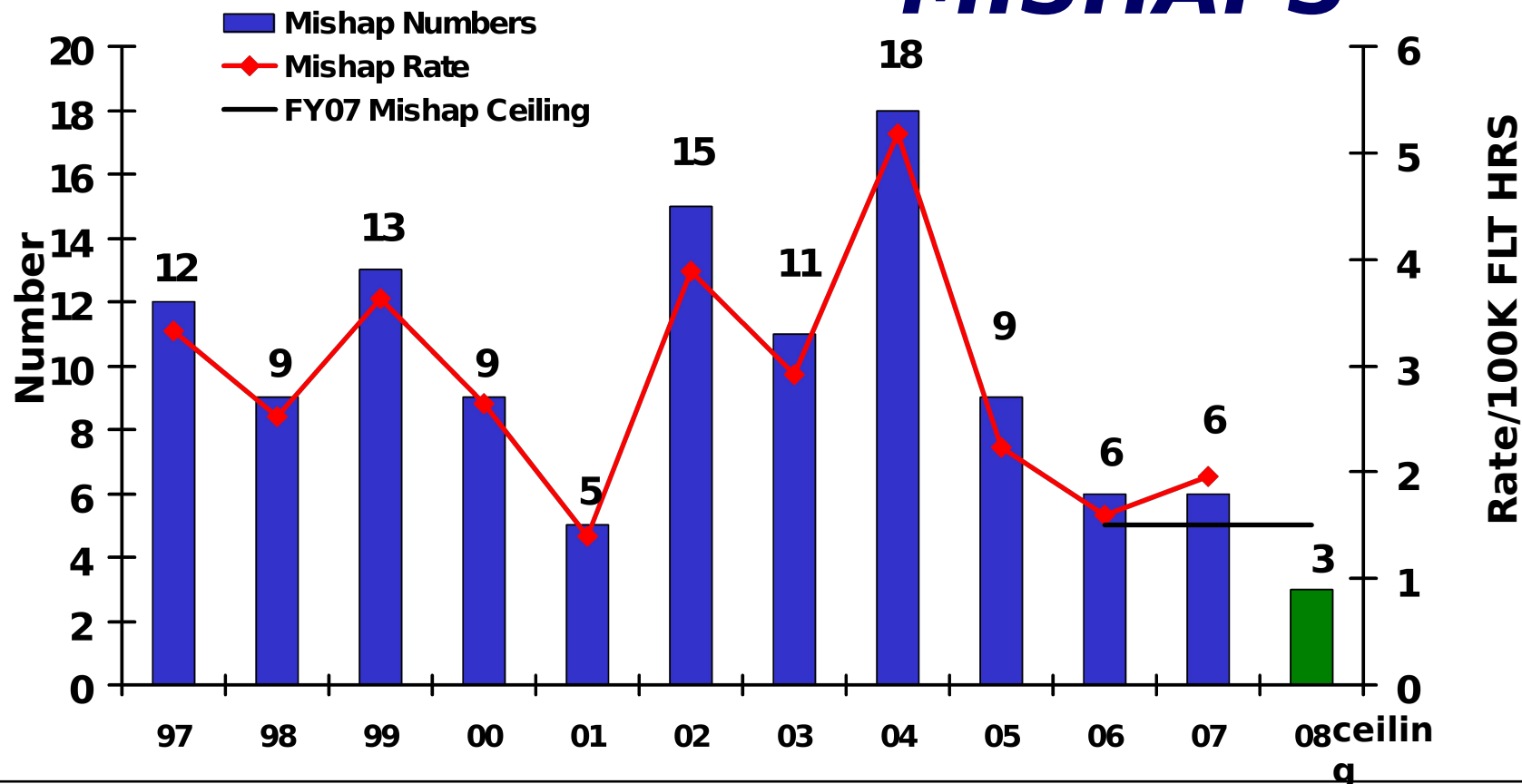
FY06 MISHAPS/MISHAP RATE: 14 / 1.44

10 YEAR AVERAGE (FY00-06) MISHAPS/MISHAP RATE: 17.1 / 1.56

ASO/ASC



CLASS A FLIGHT MISHAPS



0 Class A Flight Mishaps during this reporting period 27 July 07

July 06 - 27 July

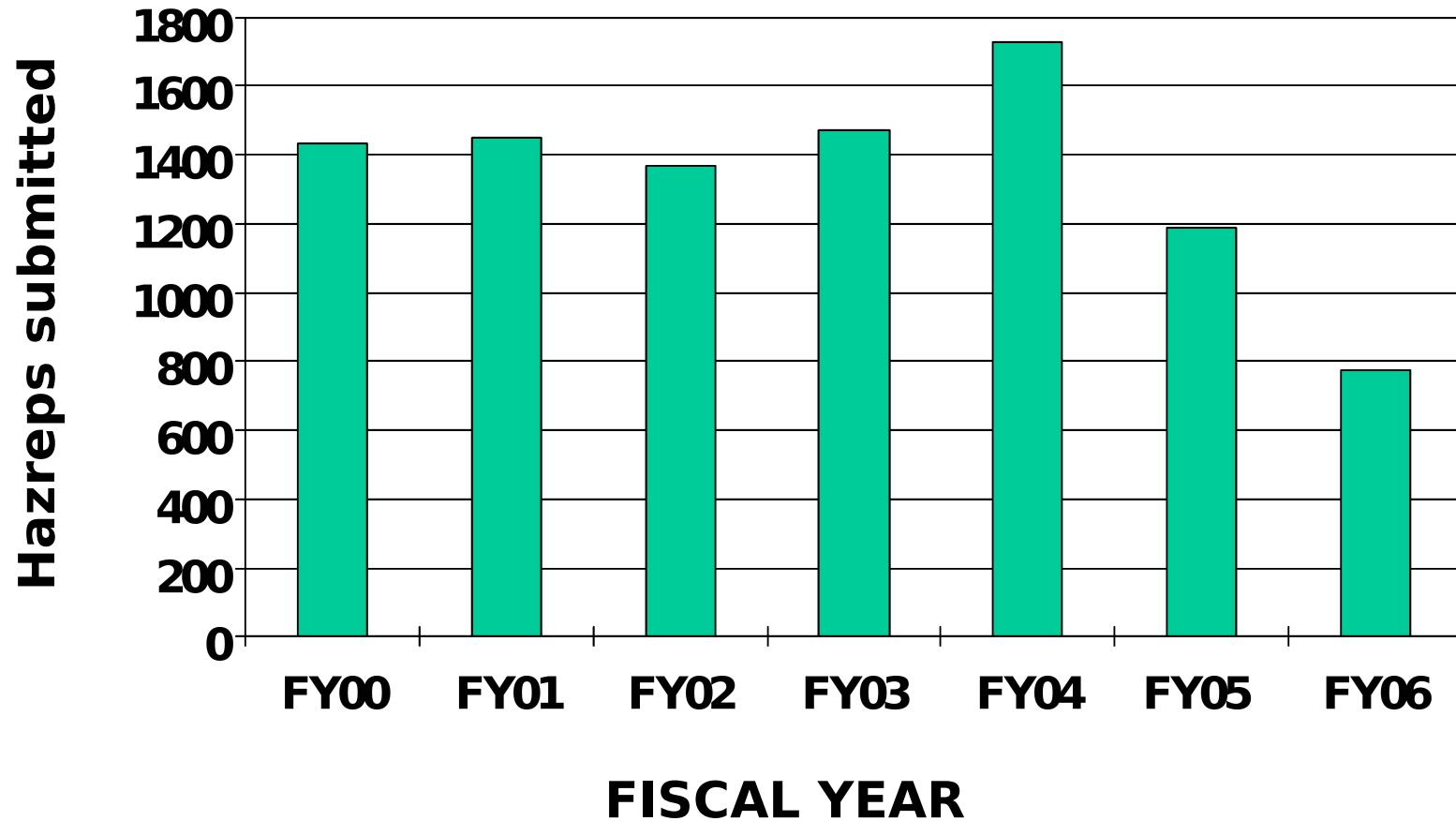
CLASS A FM/FM RATE FY COMPARISON: 6 / 1.96 6/

1.94

FY06 MISHAPS/MISHAP RATE: 6 / 1.59

10 YEAR AVERAGE ASO/ASC MISHAPS/MISHAP RATE: 10.7 / 2.82

AVIATION HAZARD REPORTS





Tactics to Defeat the “Blue Threat”

Blue Threat - Action/Inaction by own forces causing losses

Blue Threat - Losses far exceed **Red Threat** losses

The Blue Threat



- Are we learning from our costly mistakes?
 - Aircraft Movement:
 - 2000: Tow tractor hit parked acft. **Fatal** injury.
 - 2003: During acft towing, person **fatally** crushed between store & dolly
 - 2004: Sqdn acft under tow direction of yellow shirt ran over ship's blue shirt. Permanent **disability**
 - 2005: Wing walker's leg run over by acft during move - permanent **disability**
 - 2006: Acft ran over airman's right leg during taxi on flight deck - permanent **disability**
 - 2007: While towing acft airman caught and dragged under right wheel and suffered skin and muscle damage
 - 2007: Wing walker injured while acft being towed.
- Lack of supervision – guidance – enforcement
- Perceived “Low Risk” evolution
- Time Critical ORM applied?

Bottom line

Action / Inaction by **own forces**
causing losses far exceeding
those caused by **Red Threat**



Degradation in mission readiness
Impact to mission accomplishment

RED VS. BLUE THREAT (FYJAN 91-07)



- **RED THREAT: Aircraft Destroyed**

- **18 Aircraft:**
 - Marine Corps -13
 - Navy - 5

VS.

- **BLUE THREAT:**



RED VS. BLUE THREAT (FYJAN 91-07)



- **RED THREAT: Aircraft Destroyed**

- **18 Aircraft:**

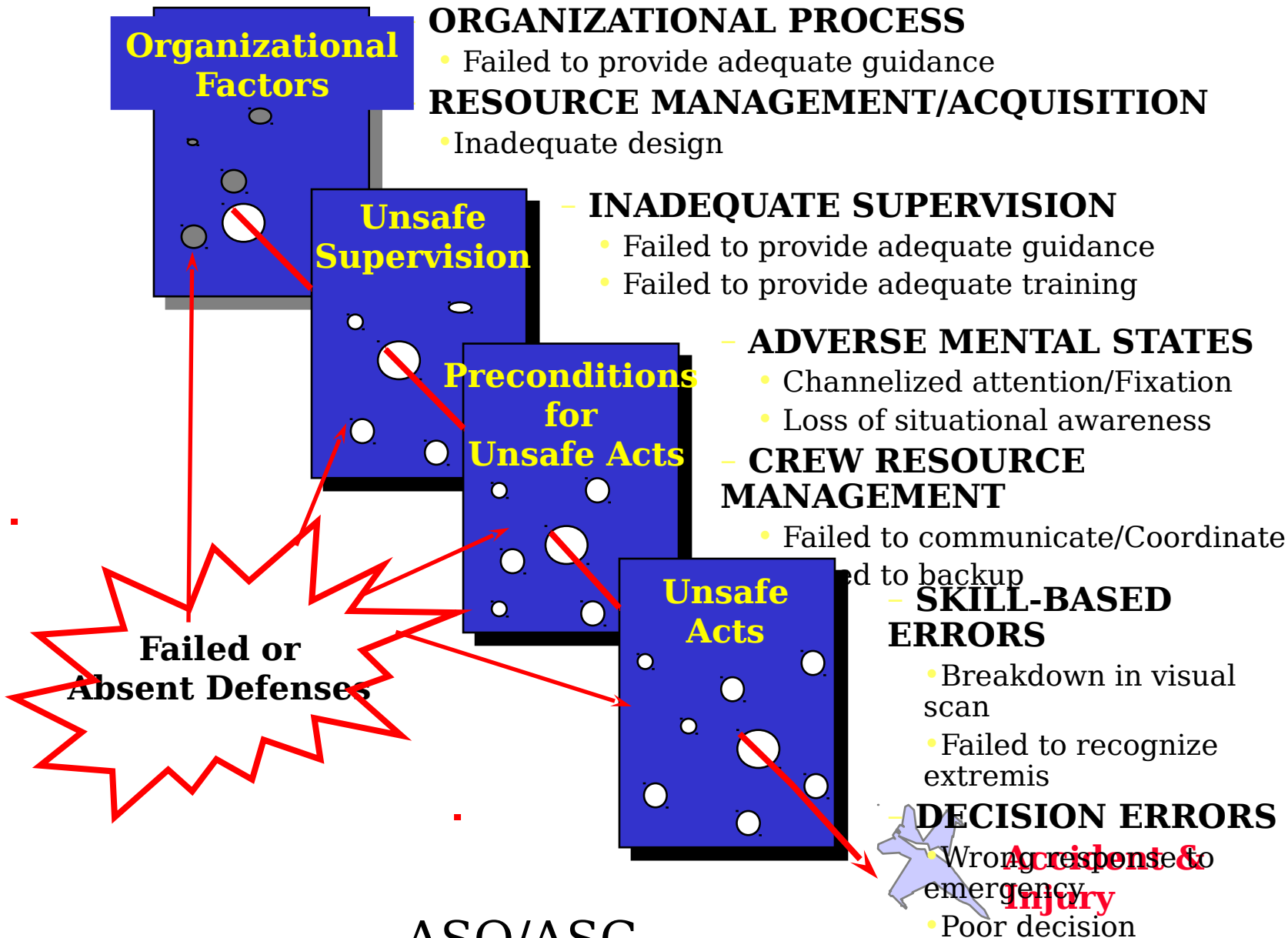
- Marine Corps -13
- Navy - 5

VS.

- **BLUE THREAT:**
525 Aircraft



Human Errors for Class A FM



End of an Era



A Safety Continuum



***Information
Training***

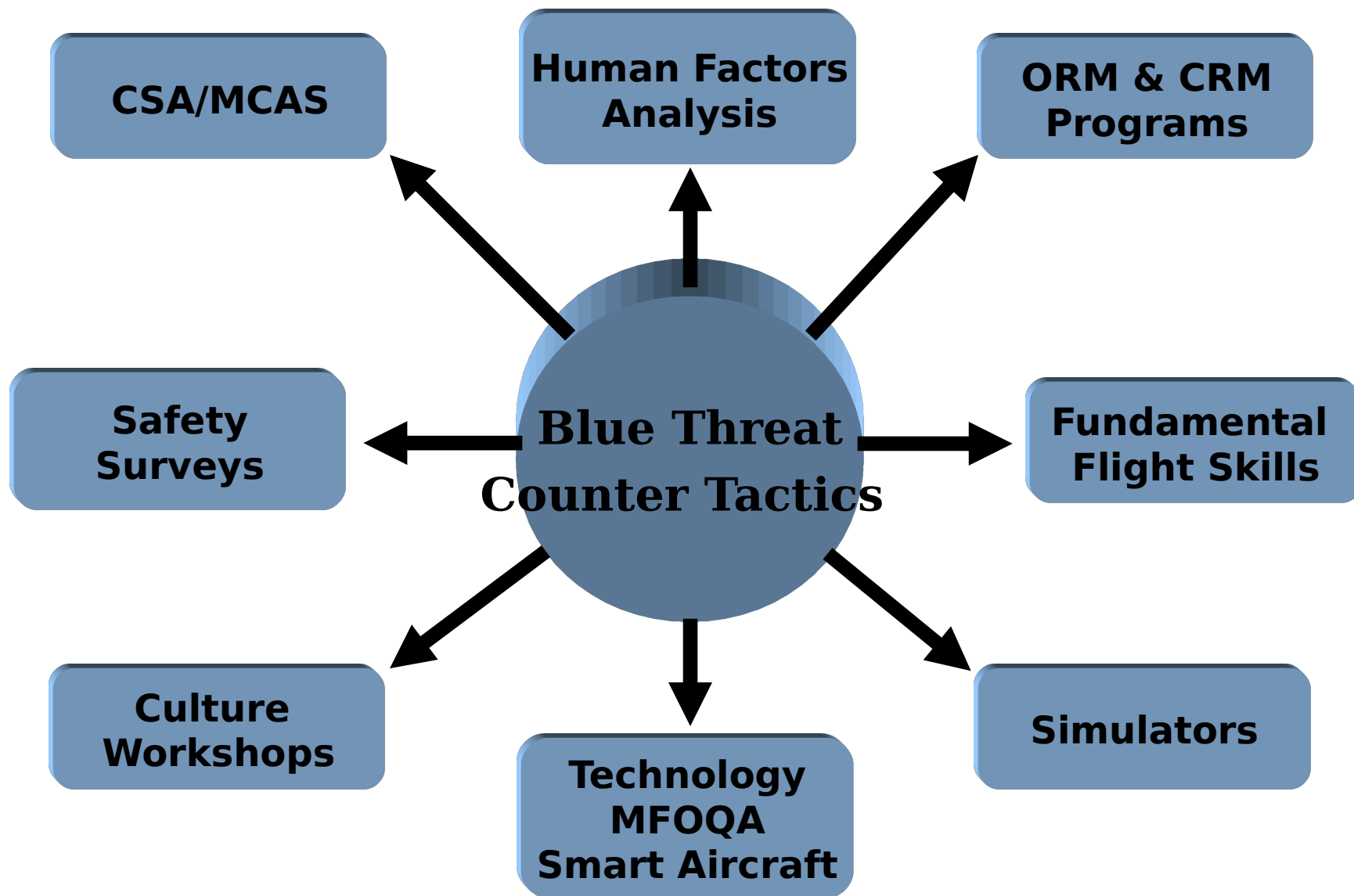
Intervention

Enforcement

Accountability

of Sailors/Marines

Aviation Intervention Strategies



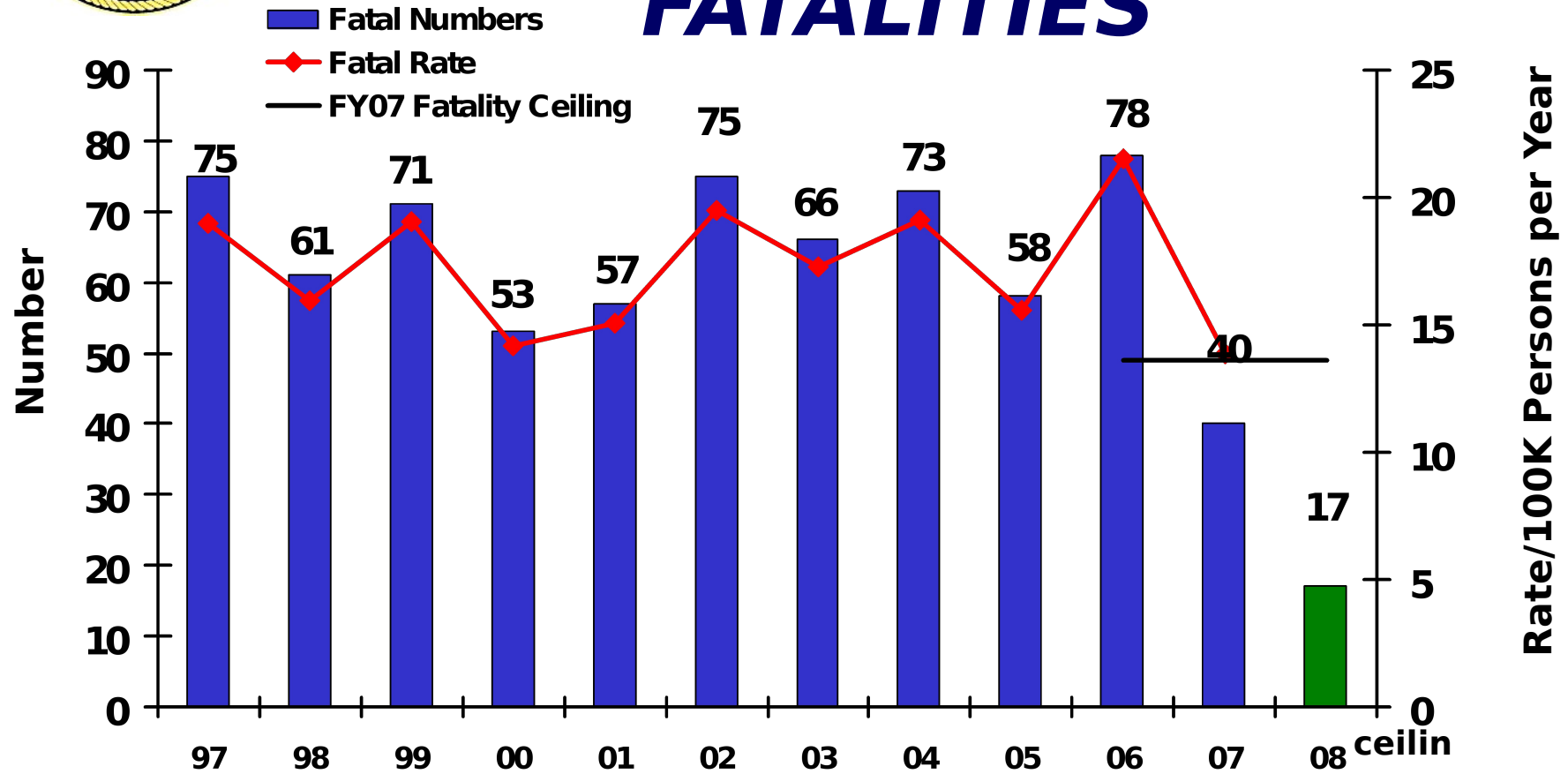
No One Should Die Because They Weren't Wearing A Seatbelt





PMV

FATALITIES



0 PMV Fatality during this reporting period 21 July 07 27 July 07

July 06 July

CLASS A FATALITIES/FATALITY RATE FY COMPARISON: 40 / 13.89 65 / 21.77

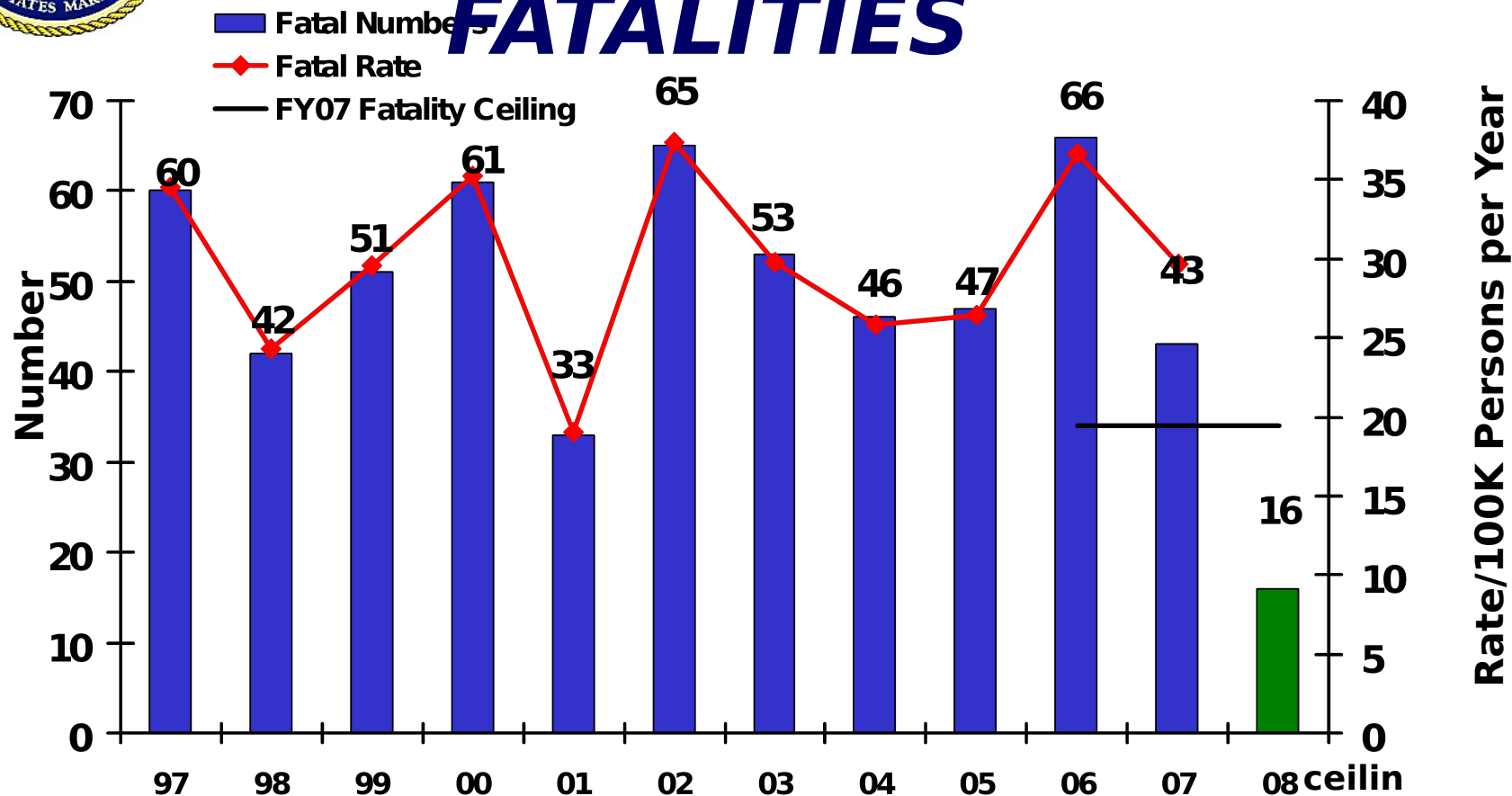
FY06 FATALITIES/FATALITY RATE: 78 / 21.49

10 YEAR AVERAGE (FY00-06) FATALITIES/FATALITY RATE: 66.7 / 17.61



PMV

FATALITIES



4 PMV Fatalities during this reporting period 21 July 2007 27 July 2007 27

July 06 July

CLASS A FATALITIES/FATALITY RATE FY COMPARISON: 44 / 29.65 47 / 31.74

FY06 FATALITIES/FATALITY RATE: 66 / 36.66

10 YEAR AVERAGE (FY00-09) FATALITIES/FATALITY RATE: 52.4 / 29.90

Factors In Traffic Deaths (USN/USMC, FY02-05)



Fatigue is considered a major factor in traffic deaths, but is under-reported throughout the fleet.

FY02-05 Deaths: 481 (USN -272) / (USMC - 209)

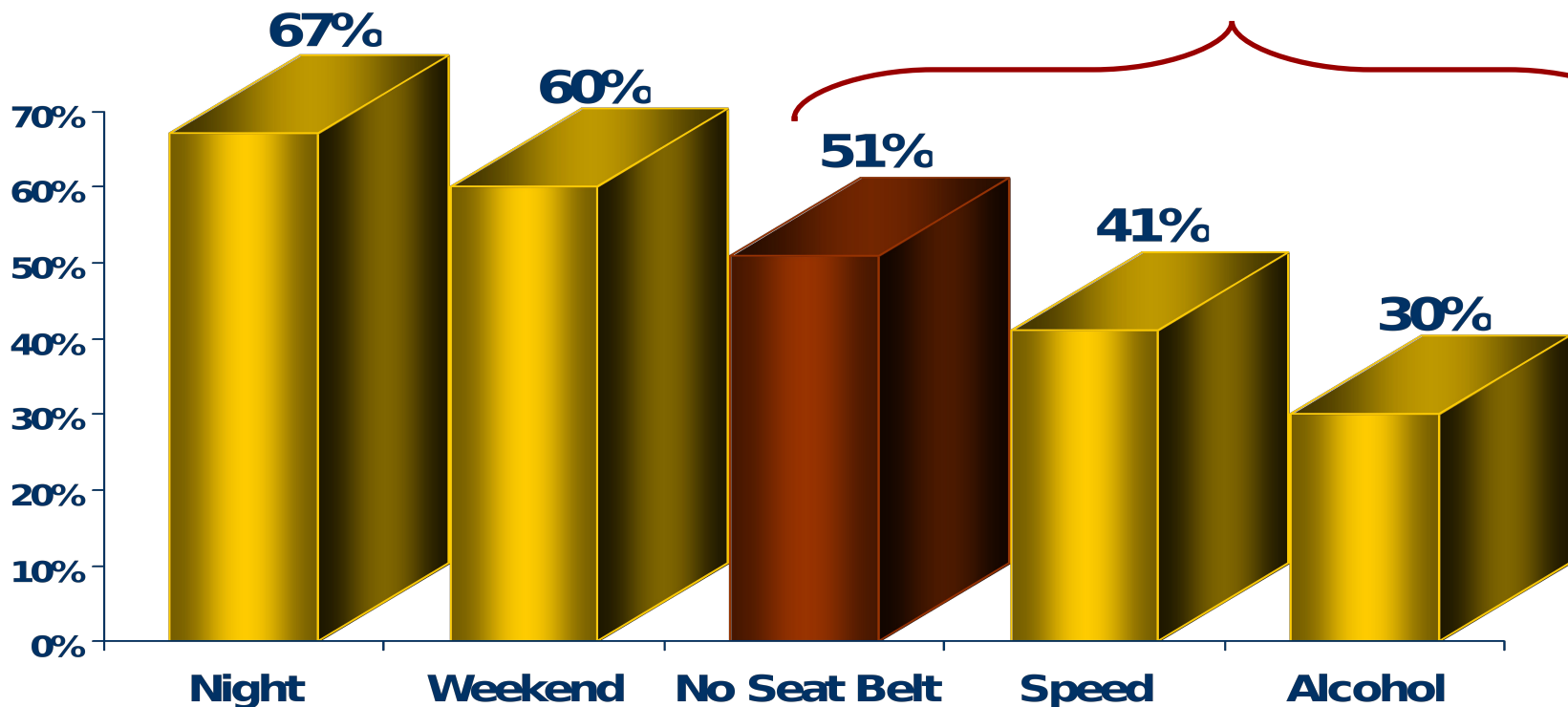
FY02: 140 (USN - 75) / (USMC - 65)

FY03: 119 (USN - 66) / (USMC - 53)

FY04: 119 (USN - 73) / (USMC - 46)

FY05: 103 (USN - 58) / (USMC - 45)

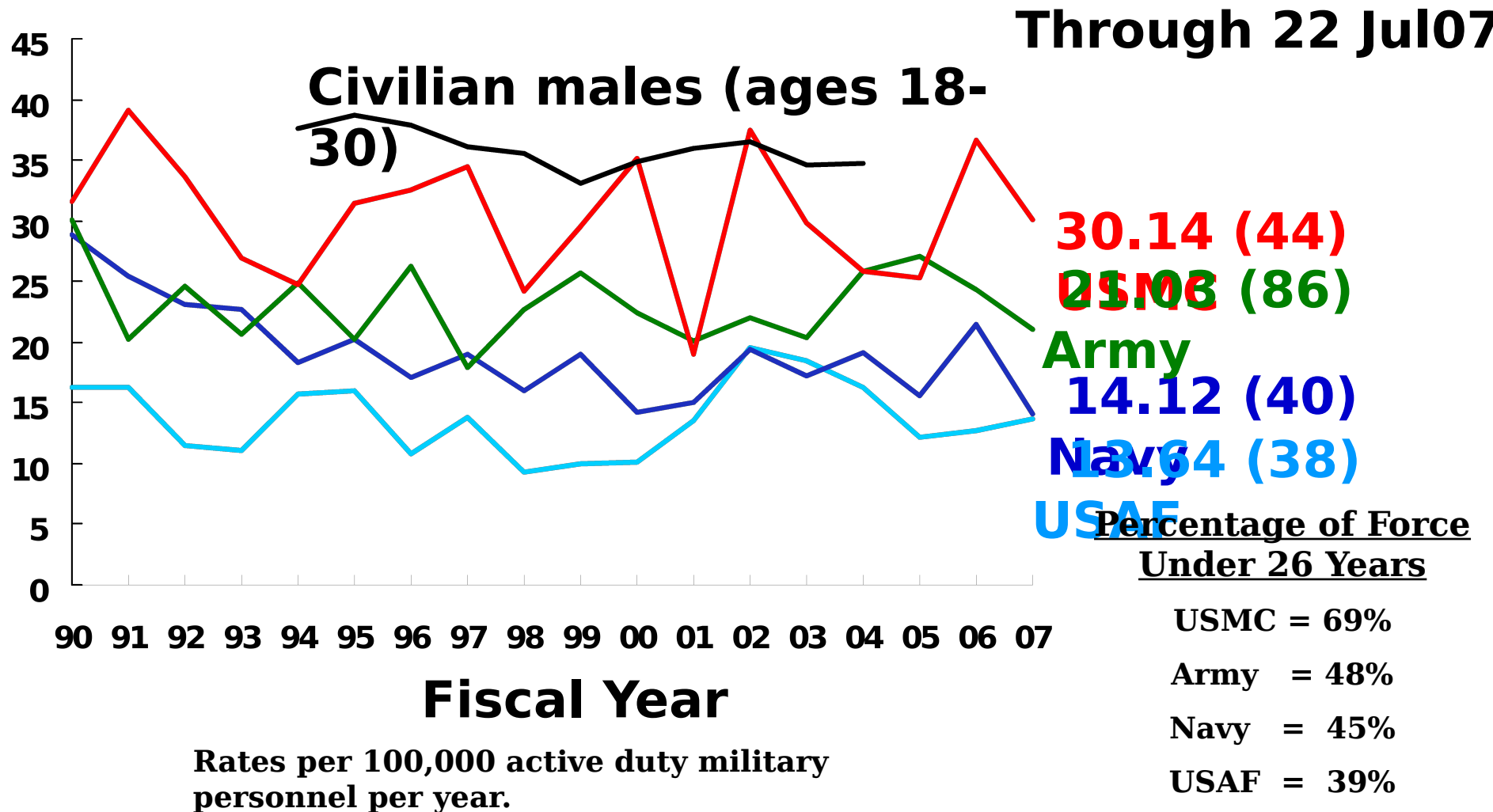
DECISION-BASED ERRORS



How Close?



Armed Forces Traffic Death Rates (FY90-07)

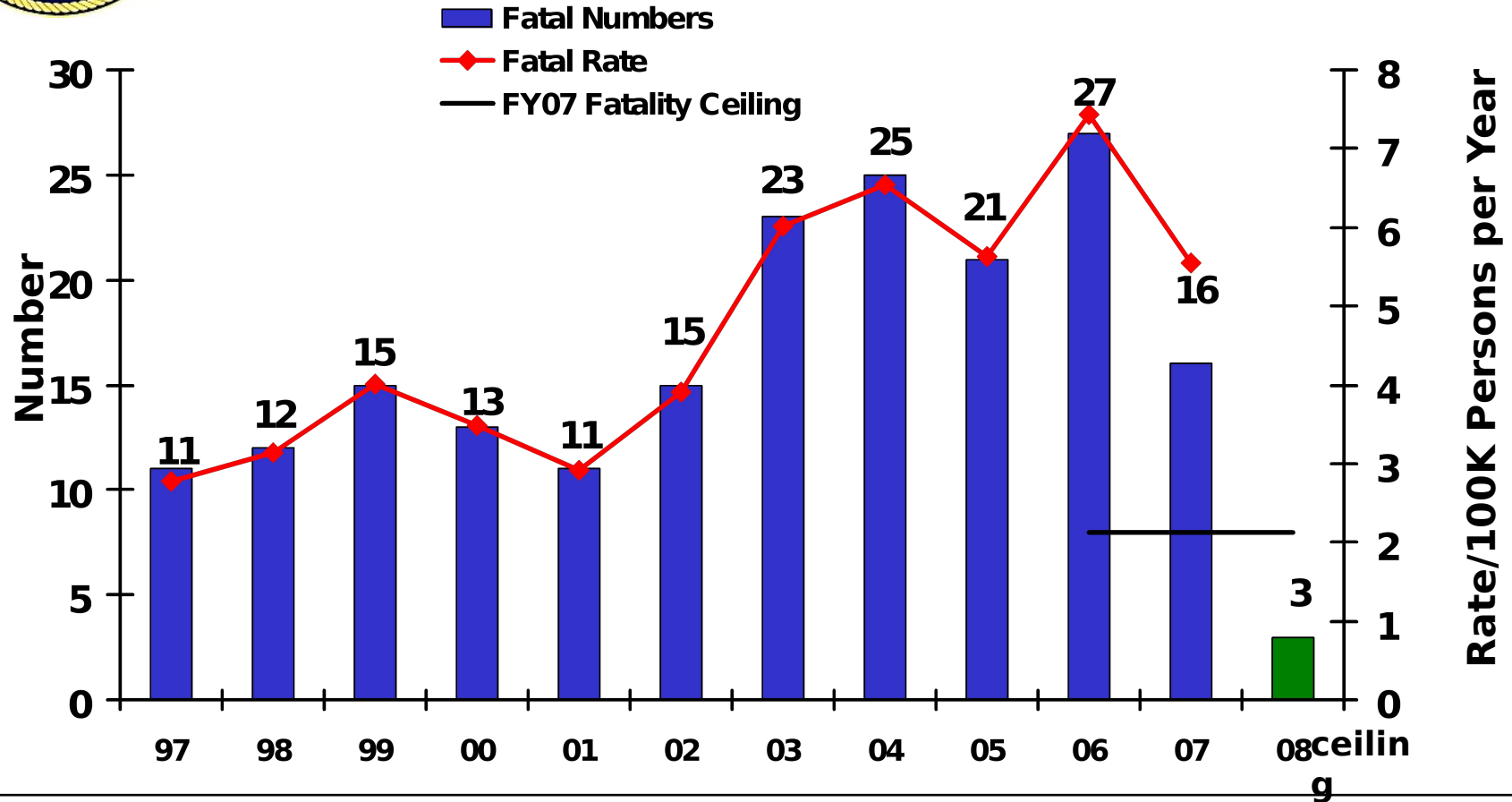


Hold On





MOTORCYCLE PMV FATALITIES



0 Motorcycle Fatalities during this reporting period 21 July 07 27 July 06 July - 27 July

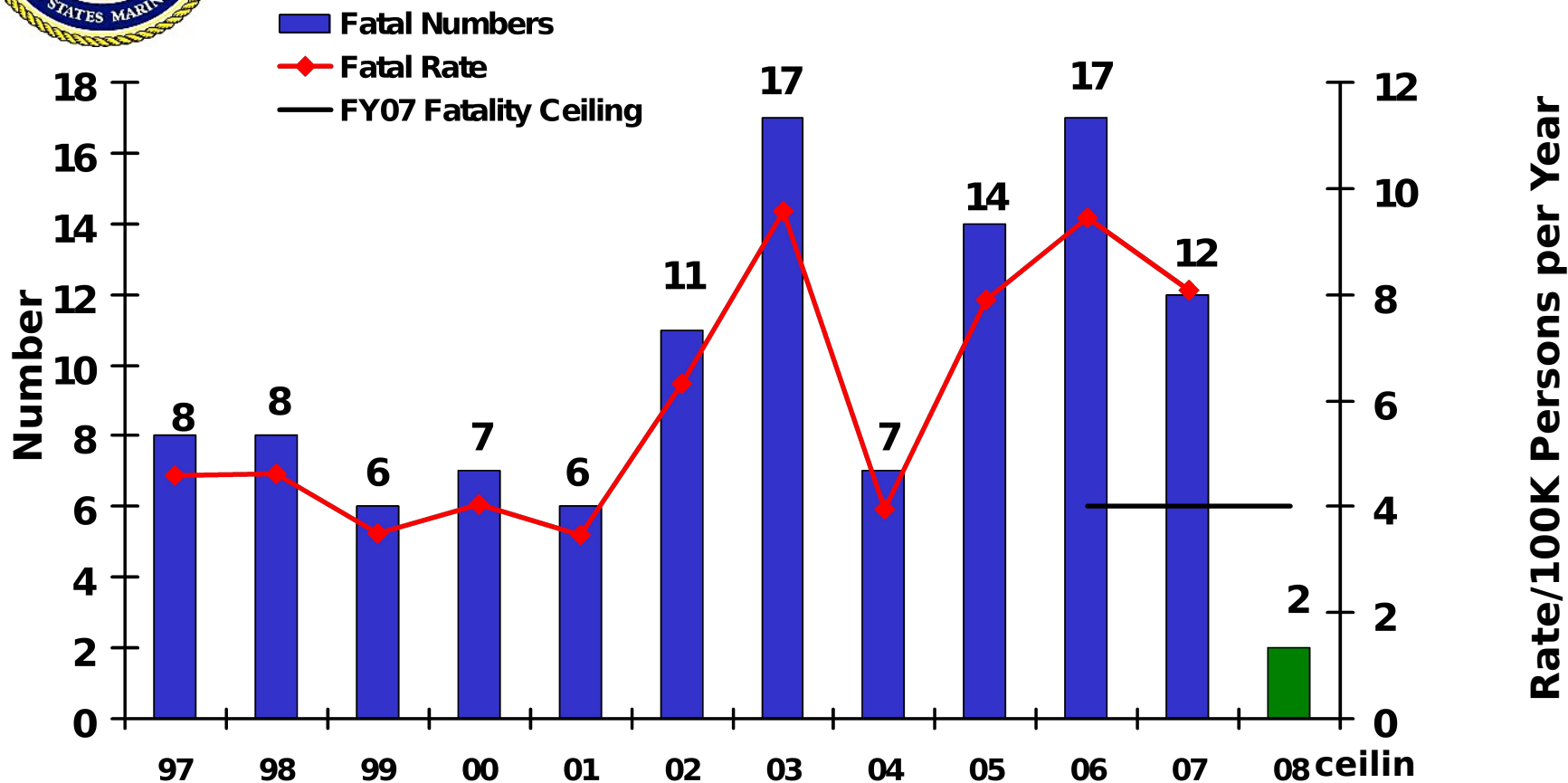
CLASS A FATALITIES/FATALITY RATE FY COMPARISON: 16 / 5.55 22 / 7.37 FY06

FATALITIES/FATALITY RATE: 27 / 7.44

10 YEAR AVERAGE (FY97-06) FATALITIES/FATALITY RATE: 17.3 / 4.57



MOTORCYCLE PMV FATALITIES



1 Motorcycle Fatalities during this reporting period 21

July - 27 July

27 July 07 27

July 06

CLASS A FATALITIES/FATALITY RATE FY COMPARISON: 12 / 8.09 13 / 8.78

FY06 FATALITIES/FATALITY RATE: 17 / 9.44

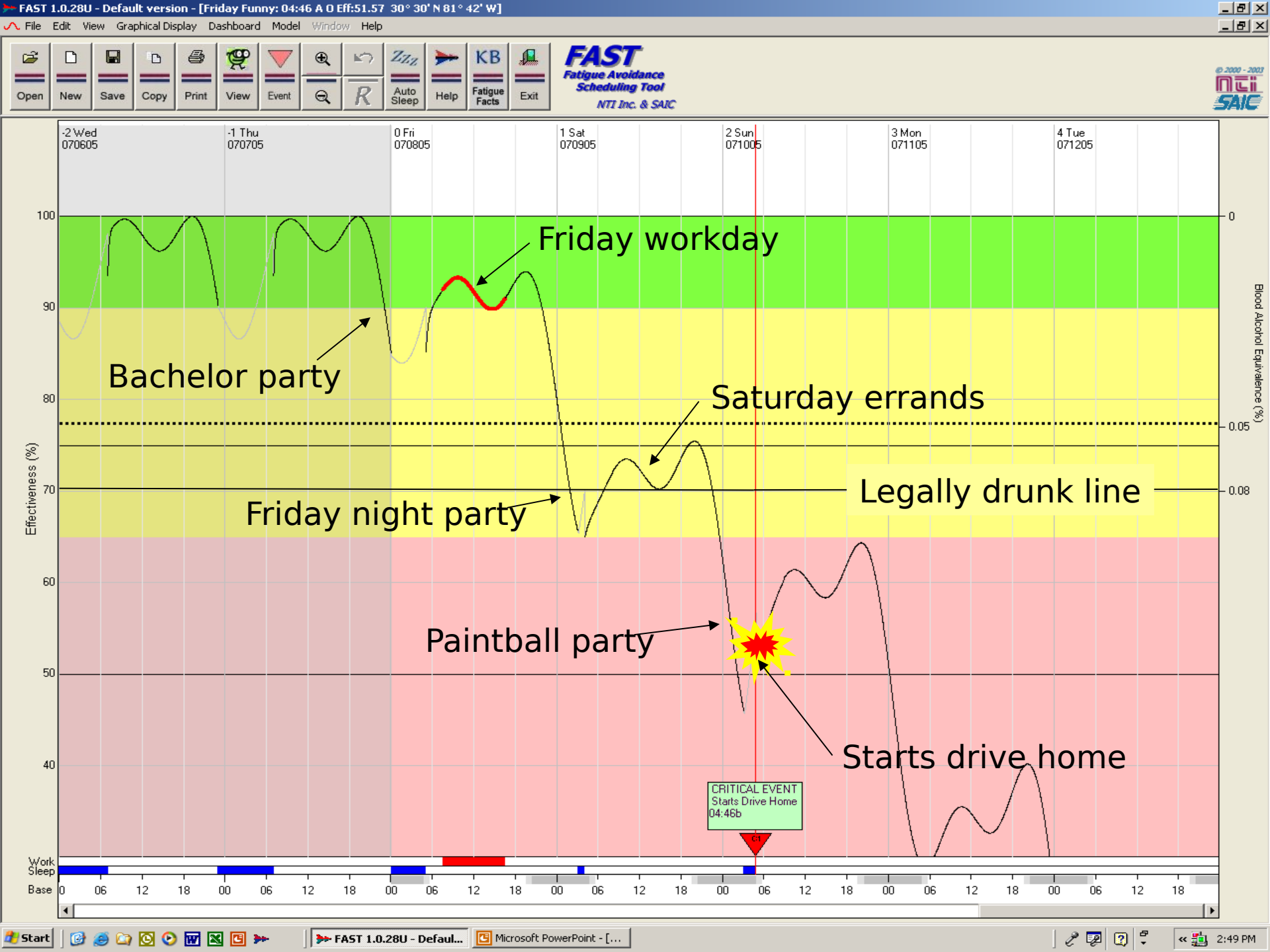
10 YEAR AVERAGE (FY00-09) FATALITIES/FATALITY RATE: 10.1 / 5.76

ASQ/ASC

NAVSAFECEN “Friday Funnies”



- **An E-5 went to a bachelor party until midnight, slept five hours, then went to work. Toiled all day, then went on leave.**
- **Drove 120 miles to a party and boogalooed until 3:00 in the morning. Slept for an hour on the way back, ran errands all day, met some friends for a midnight game of paintball that lasted, once again, until that magical hour of 3 a.m.**
- **Headed home at 4:45 a.m. Pulled over within 30 minutes to stretch and yawn.**
- **He then got back behind the wheel, fell asleep on a causeway, veered off the road and ran into two guard rails. His pickup truck went airborne and splashed down into the bay below.**
- **The Sailor came to, released his seat belt, crawled through a broken window, and swam to a pylon. Fortunately, a passing motorist had seen this drama and called emergency services.**
- **The sound of your vehicle crumpling into an indistinguishable wad around your suddenly wide-awake self is your last choice in an alarm clock. And spending four days in the hospital and two weeks convalescing is a dismal way to spend your two weeks of post-deployment leave.**



No Seatbelt



Best Fleet Practices - PMV



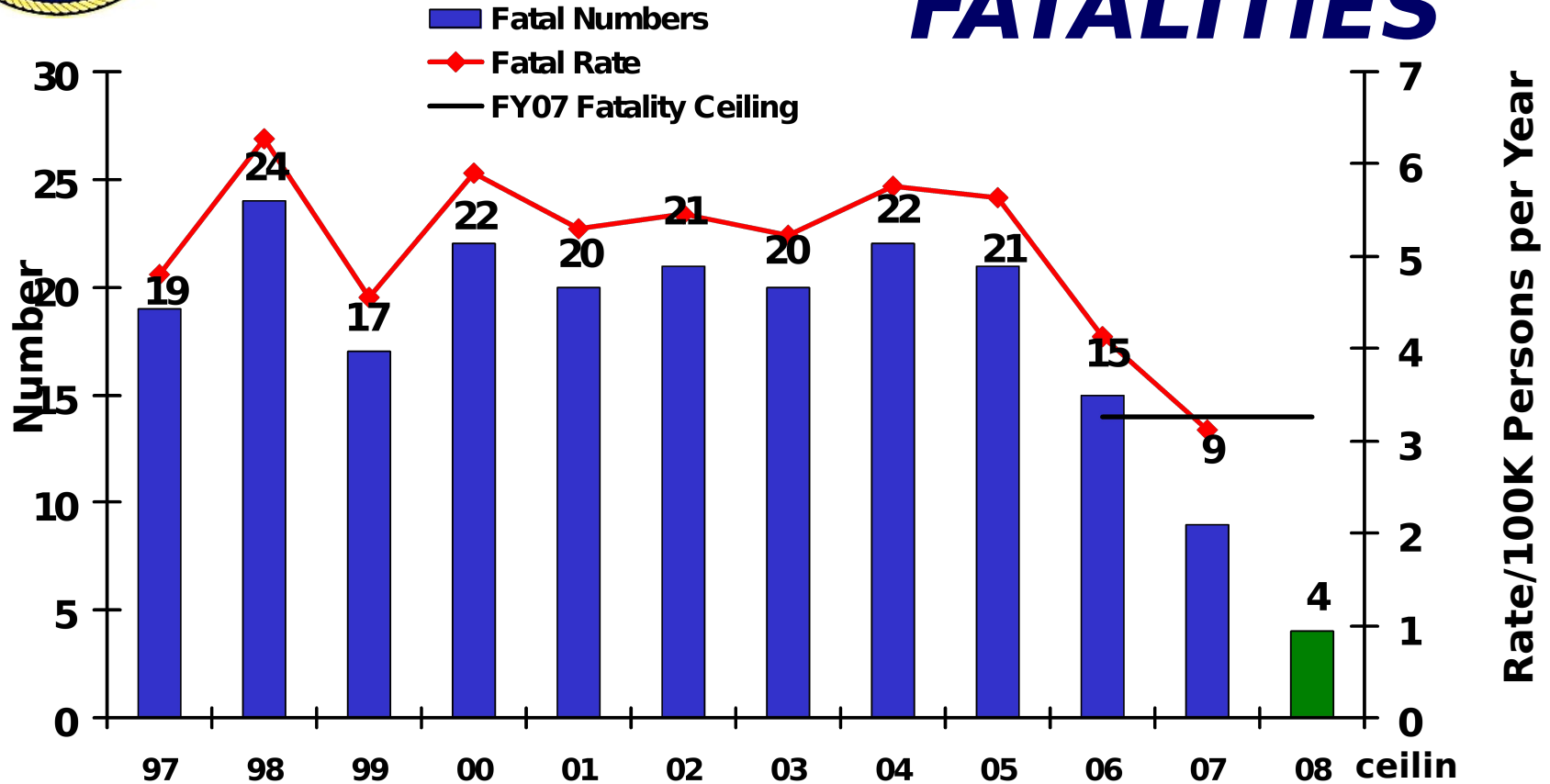
- 1. Risk Management - Find out who is at risk - Help them manage that risk.**
- 2. Letter home to solicit family's help to keep their loved one safe.**
- 3. Traffic Safety Toolbox to provide the necessary tools to reduce mishaps.**
- 4. Engage in partnerships with local community. (Click It or Ticket, You Drink, You Drive, You Lose, MADD)**
- 5. Traffic Safety Across America. (Trained supervisory personnel on drinking and driving, seat belt use, PPE, speed, fatigue)**
- 6. TRiPS**

What Hazards Exist Here?





OFF-DUTY/REC FATALITIES



1 Off-duty/Rec Fatalities during this reporting period 27 July 07 27 July 06 July - 27 July

CLASS A FATALITIES/FATALITY RATE FY COMPARISON: 9 / 3.12 14 / 4.69

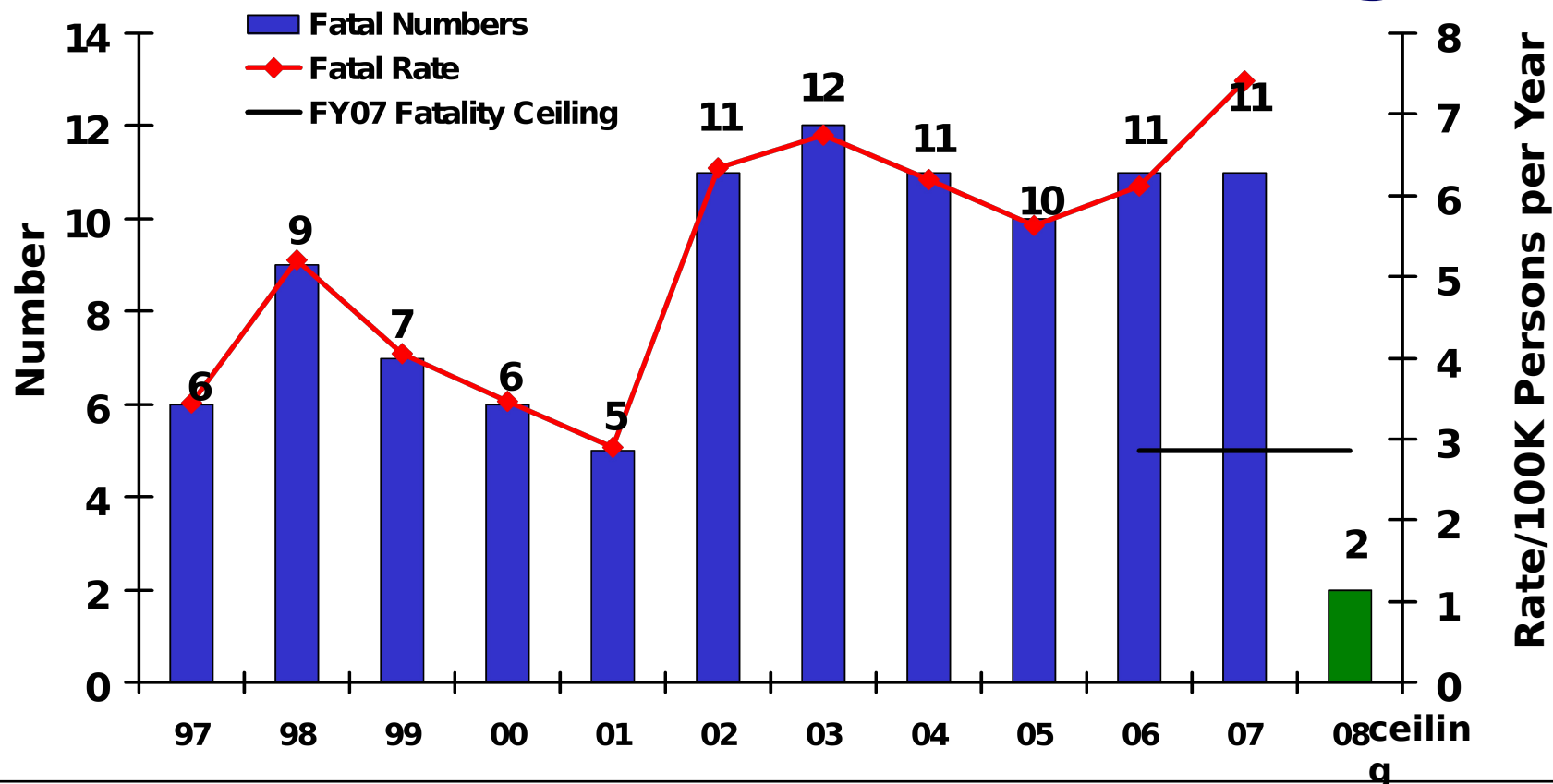
RATE: 15 / 4.13

10 YEAR AVERAGE (FY00-06) FATALITIES/FATALITY RATE: 20.1 / 5.31

ASQ/ASC



OFF-DUTY/REC FATALITIES



0 Off-duty/Rec Fatalities during this reporting period 21 July 07 - 27 July 07

July 06- 27 July

CLASS A FATALITIES/FATALITY RATE FY COMPARISON: 11/ 7.41 7 / 4.73

FY06 FATALITIES/FATALITY RATE: 11 / 6.11

10 YEAR AVERAGE (FY97-06) FATALITIES/FATALITY RATE: 8.8 / 5.02

Hot shot



THE COMMANDING OFFICER



SAFETY

PEOPLE

MANPOWER

TRAINING

OPS

FRP

FAMILY

HEALTH

MAINTENANCE

COMBAT
READINESS

PROGRAMS

CAREER

A MISHAP-FREE NAVY+MARINE CORPS *Team*

Is It Possible??

Navy Mishap Free Squadrons (FY-06)



** No reported Class A/B/C , FM/FRM/AGM/PMV/ROD*

HC-11	HC-85	HS-2	HS-3
HSC-22	HSC-26	HSL-42	HSL-60
HSM-41	HX-21	VAQ-136	VAW-113
VAW-115	VAW-121	VAW-122	VAW-124
VAW-125	VAW-126	VAW-77	VAW-78
VFA-132	VFA-15	VFA-204	VFA-
	213		
VFA-31	VFA-32	VFA-87	VP-1
VP-62	VPU-1	VR-24	VR-46
VR-48	VR-52	VR-54	VR-55
VR-58	VR-59	VR-62	VR-64
VS-24	VT-3	VT-35	VT-4
VT-9	VX-1	VX-20	VX-30
VXS-1	NAVFLIGHT	DEMIRON	

QUESTIONS?
COMMENTS!

QUESTIONS?
COMMENTS!



Blue Threat Bottomline



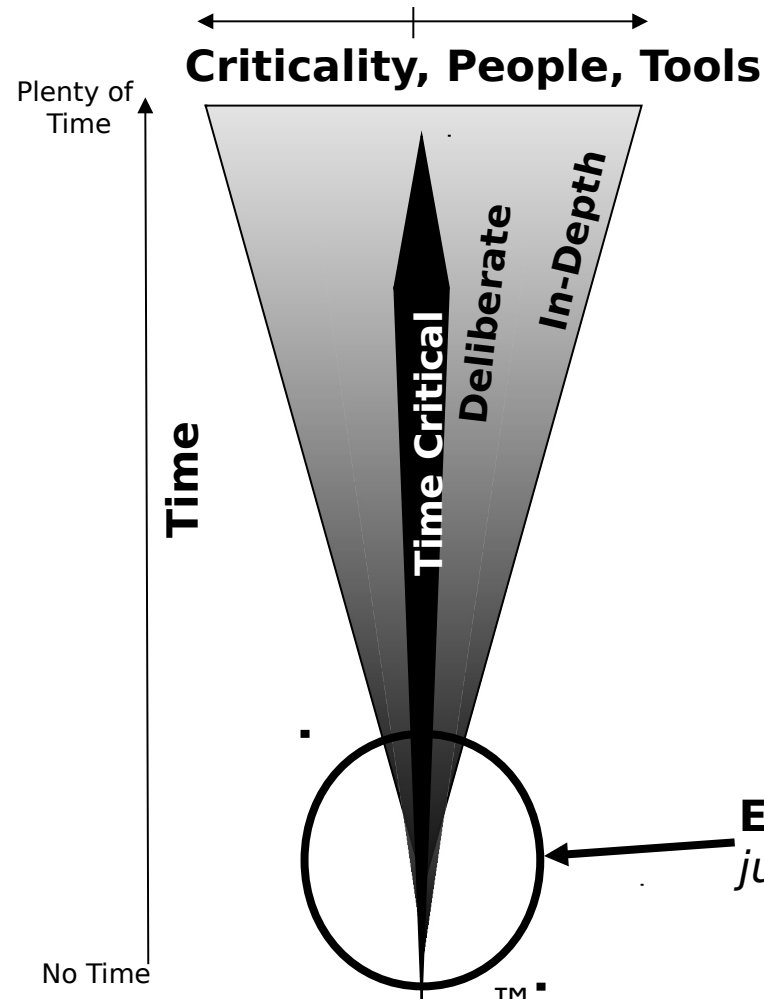
Action / Inaction by **own forces** causing losses far exceeding those caused by **Red Threat**



- Degradation in mission readiness
- Impact to mission accomplishment

ORM is a tactic to help mitigate the Threat

Time Critical Risk Management



Decision Making impacted by:

- Available time
- Criticality of the decision
- Number of people involved
- Available tools & sources of information
- Decision making bias

Execution Phase (*Typically where junior personnel live and work*)

ORM 101

A process & tactic, not a program



4 Principles

1. Accept risks when benefits outweigh the costs.
2. Accept no unnecessary risk.
3. Anticipate and manage risk by planning.
4. Make risk decisions at the right level.

3 Levels

Time Critical - Little time, done on the run, applied to control hazards introduced by unexpected events and changes to the plan

Deliberate - Pre-mission planning, time available for planning, recorded on paper

In Depth - Long term process with extensive research and planning

5 Steps

